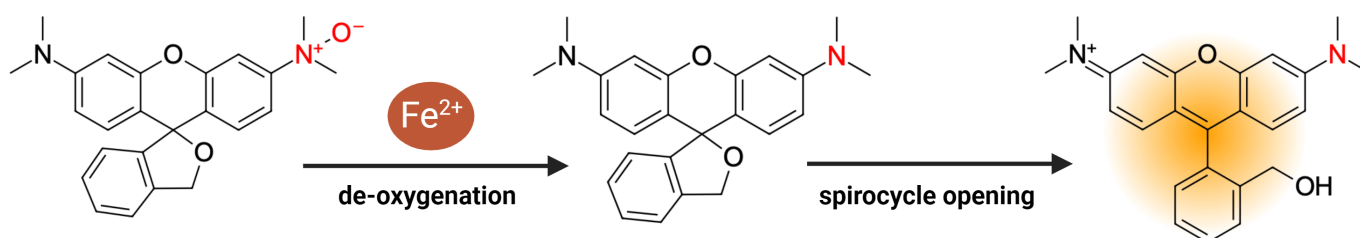


HMRhoNox-M, Fe(II)-selective fluorescent probe

<http://www.lumiprobe.com/p/hmrhonox-m>

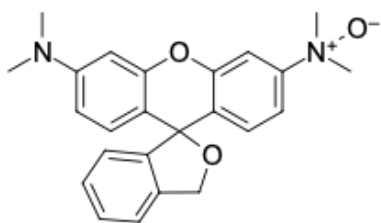
HMRhoNox-M (also known as LysoRhoNox) is a Fe^{2+} -selective fluorescent probe based on the N-oxide-controlled spirocyclization of tetramethyl-hydroxymethyl rhodamine.

In the absence of Fe^{2+} , HMRhoNox-M exists in the non-fluorescent spirocyclic form showing only negligible fluorescence in an aqueous buffer and at physiological pH. The addition of Fe^{2+} induces a 60-fold increase of the fluorescence signal at 575 nm through the deoxygenation of the dialkylamino group and the transition of the probe to an open fluorescent form. HMRhoNox-M responds to Fe^{2+} in a dose-dependent manner.

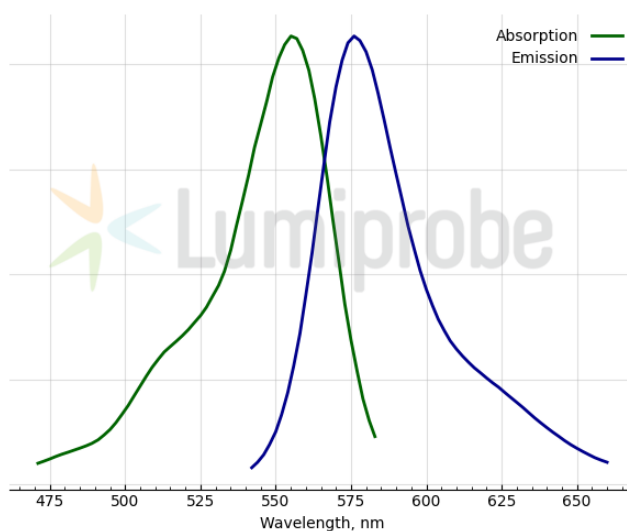


The fluorescence response of HMRhoNox-M is highly selective for Fe^{2+} over other transition metal ions, including Fe^{3+} , alkali metal ions, and alkaline earth metal ions.

HMRhoNox-M is the cell-permeant probe that is mainly localized in lysosomes. It is suitable for monitoring fluctuations of endogenous labile iron in living cells, including the transferrin-induced Fe uptake.



Structure of HMRhoNox-M



Absorption and emission spectra of HMRhoNox-M

General properties

Appearance:	beige-pinkish crystals
Molecular weight:	388.47
Molecular formula:	$\text{C}_{24}\text{H}_{24}\text{N}_2\text{O}_3$
Quality control:	NMR ^1H and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.

Spectral properties

Excitation/absorption maximum, nm:	555
Emission maximum, nm:	575